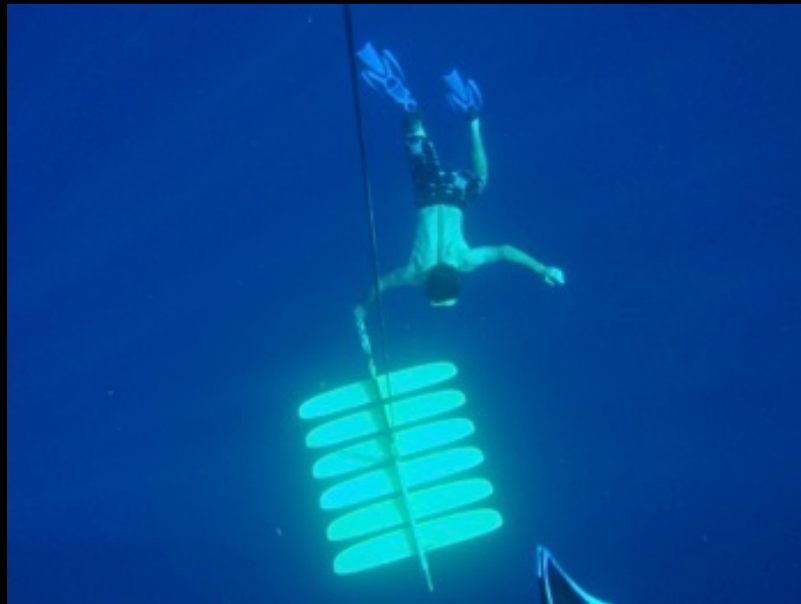




spurs wave glider update january 2013

Dave Fratantoni and Ben Hodges
Autonomous Systems Laboratory
Department of Physical Oceanography
Woods Hole Oceanographic Institution
Woods Hole, Massachusetts, USA

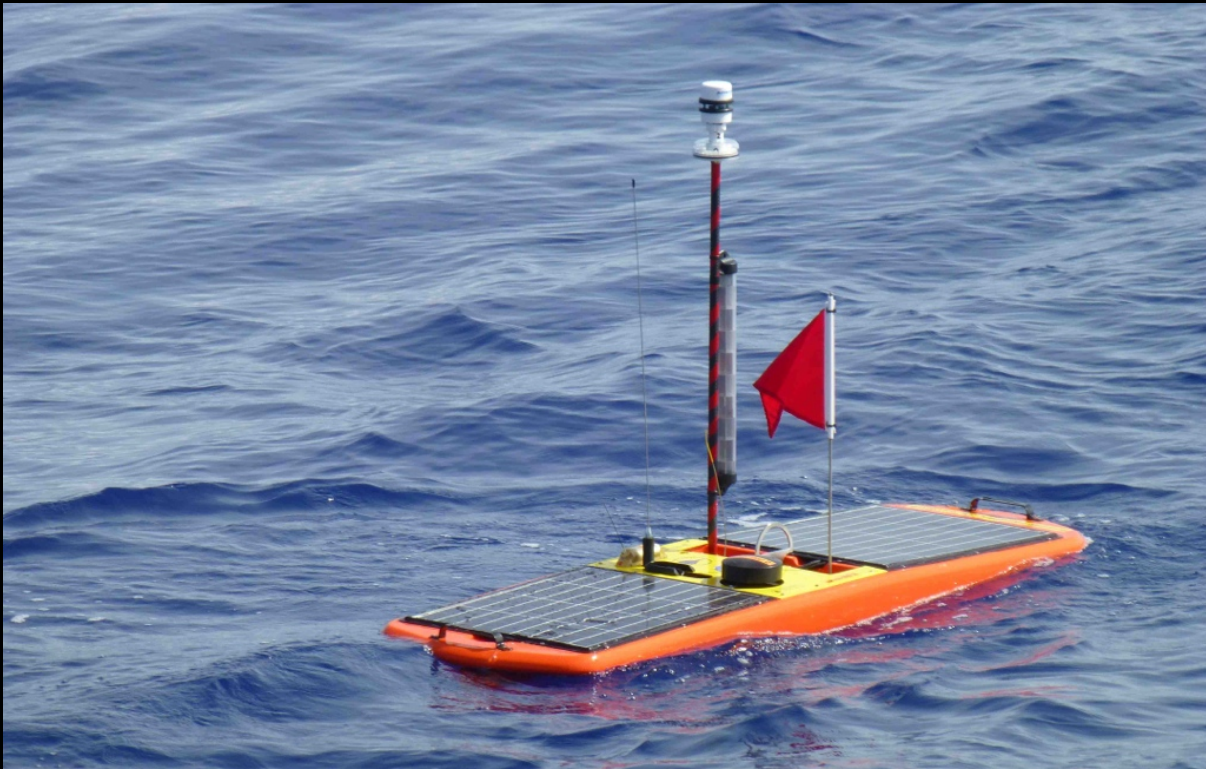
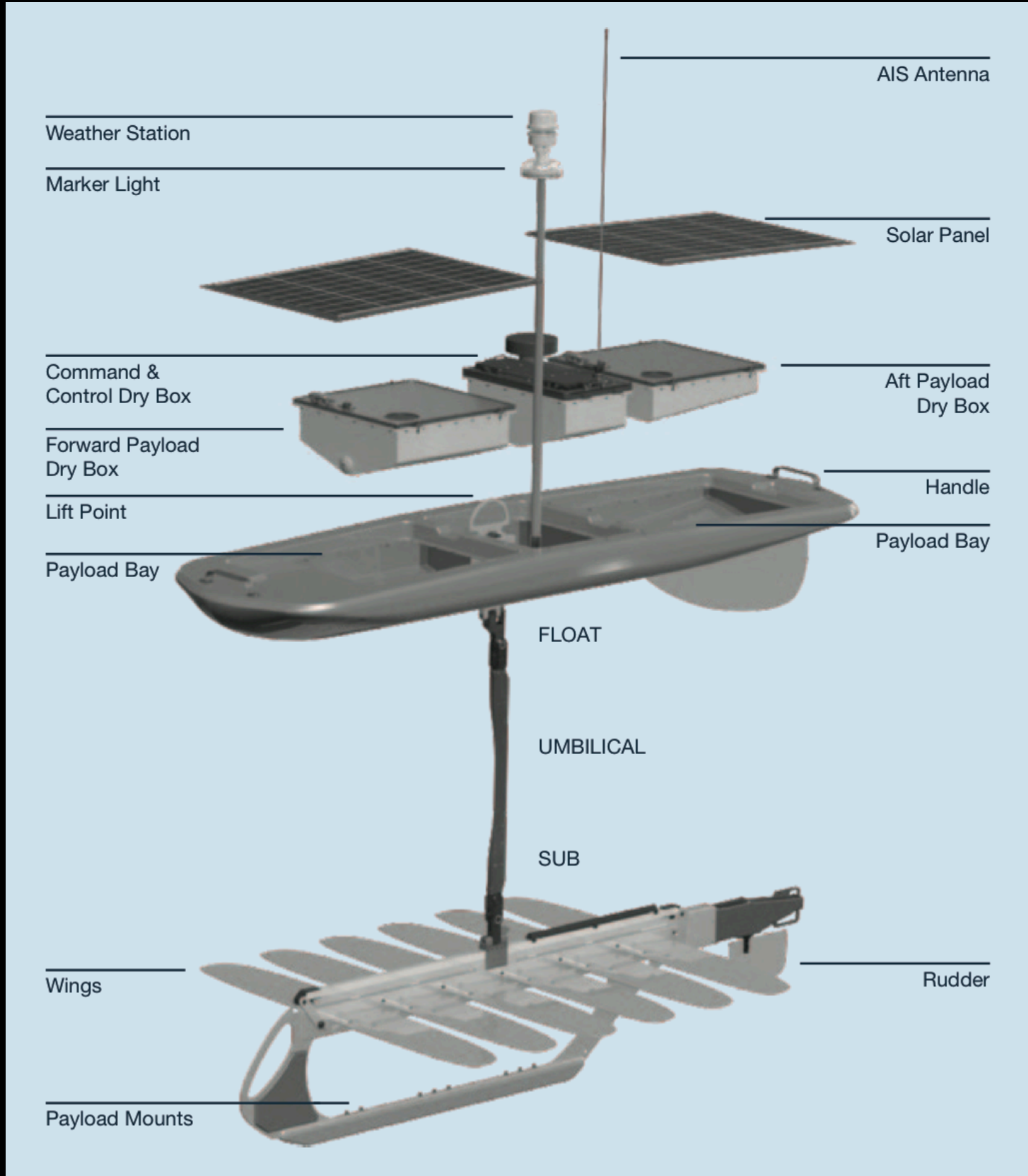


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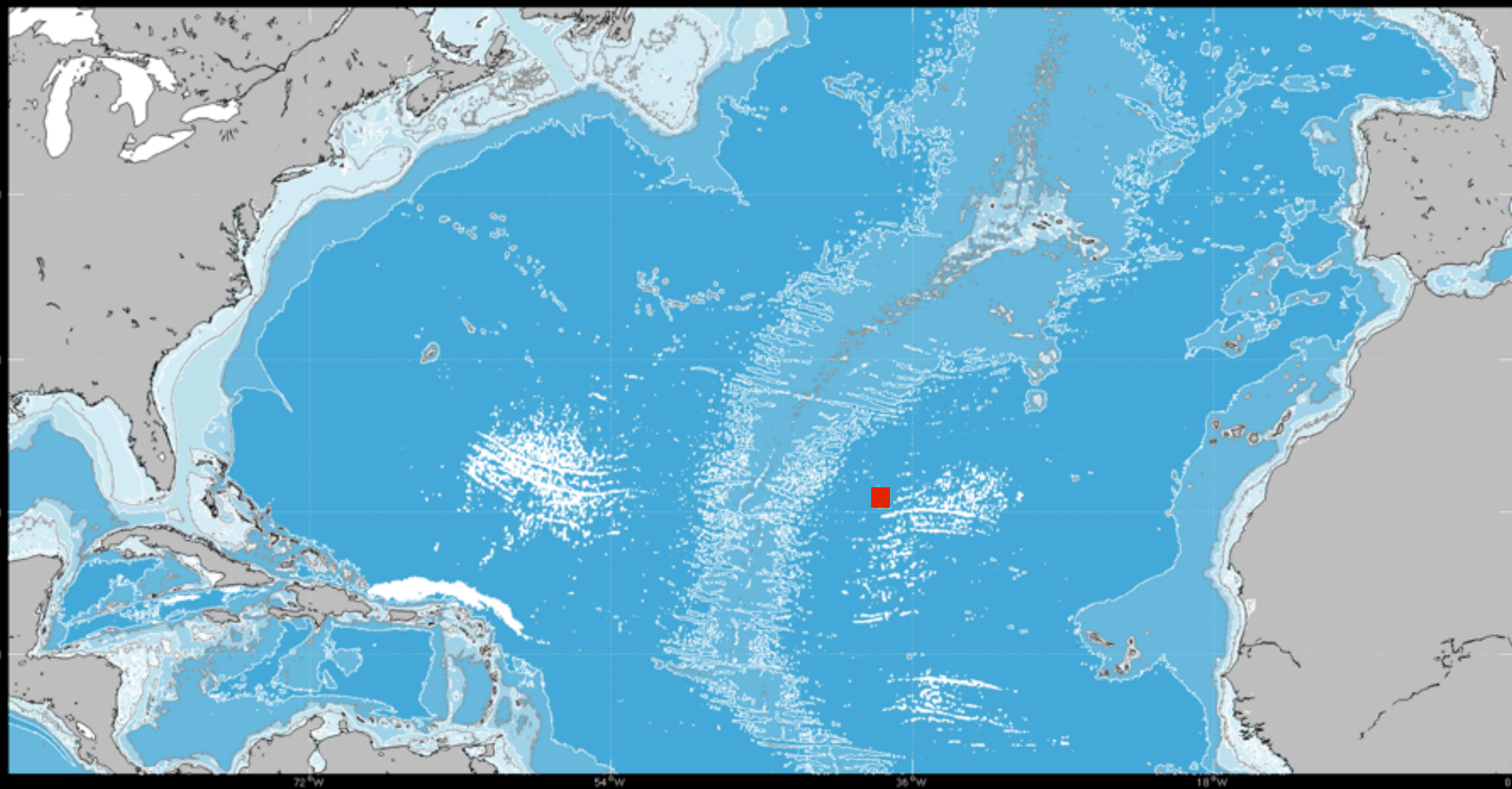


- What is the character of the upper-ocean salinity field at the limits of our present observational capabilities?
- How does variability on these scales contribute to and/or reflect the processes responsible for surface salinity patterns?
- To what extent is atmosphere-ocean interaction (and by extension, the hydrological cycle and the climate system) sensitive to the detailed structure of upper-ocean salinity and temperature?

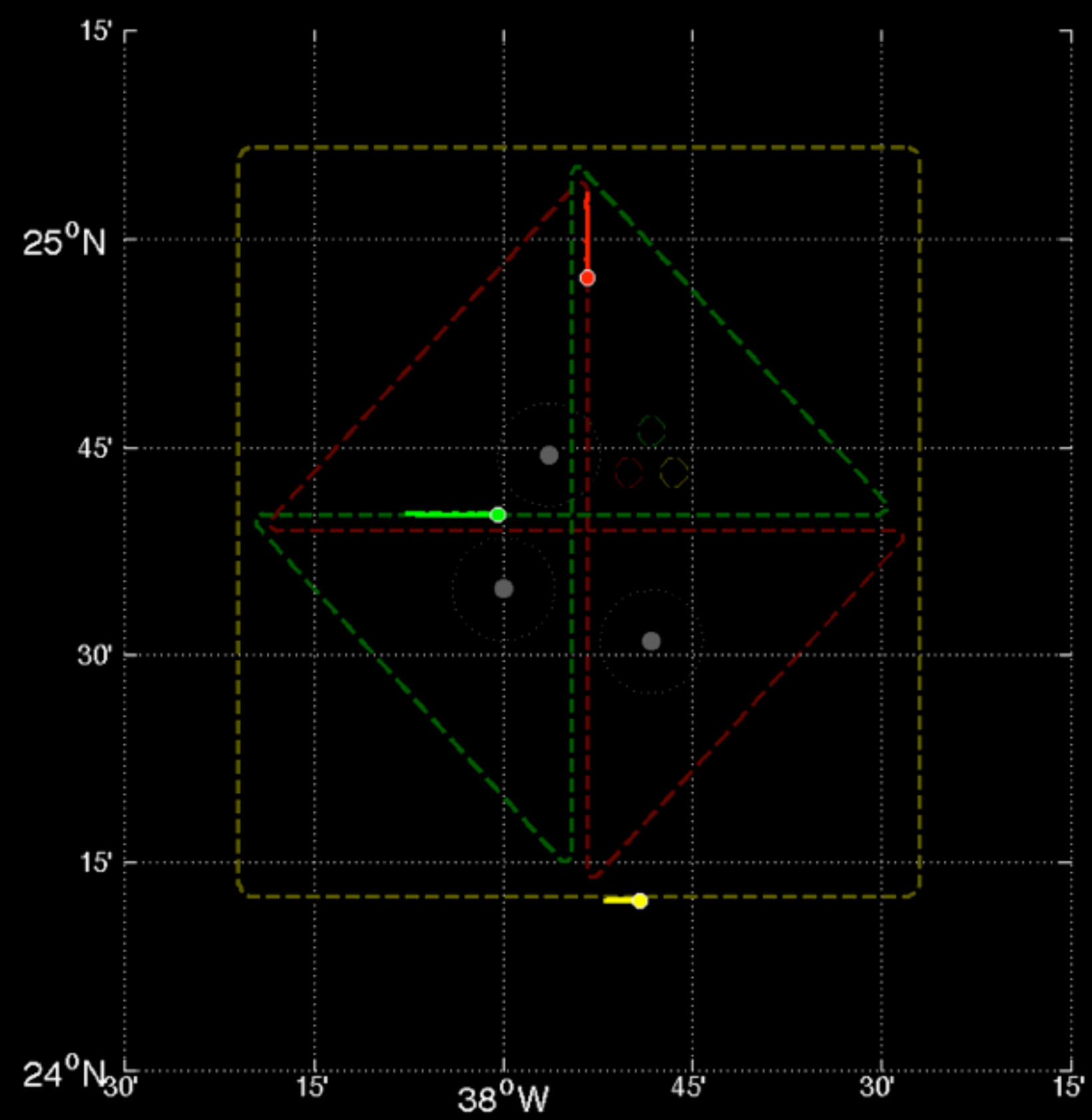
wave glider



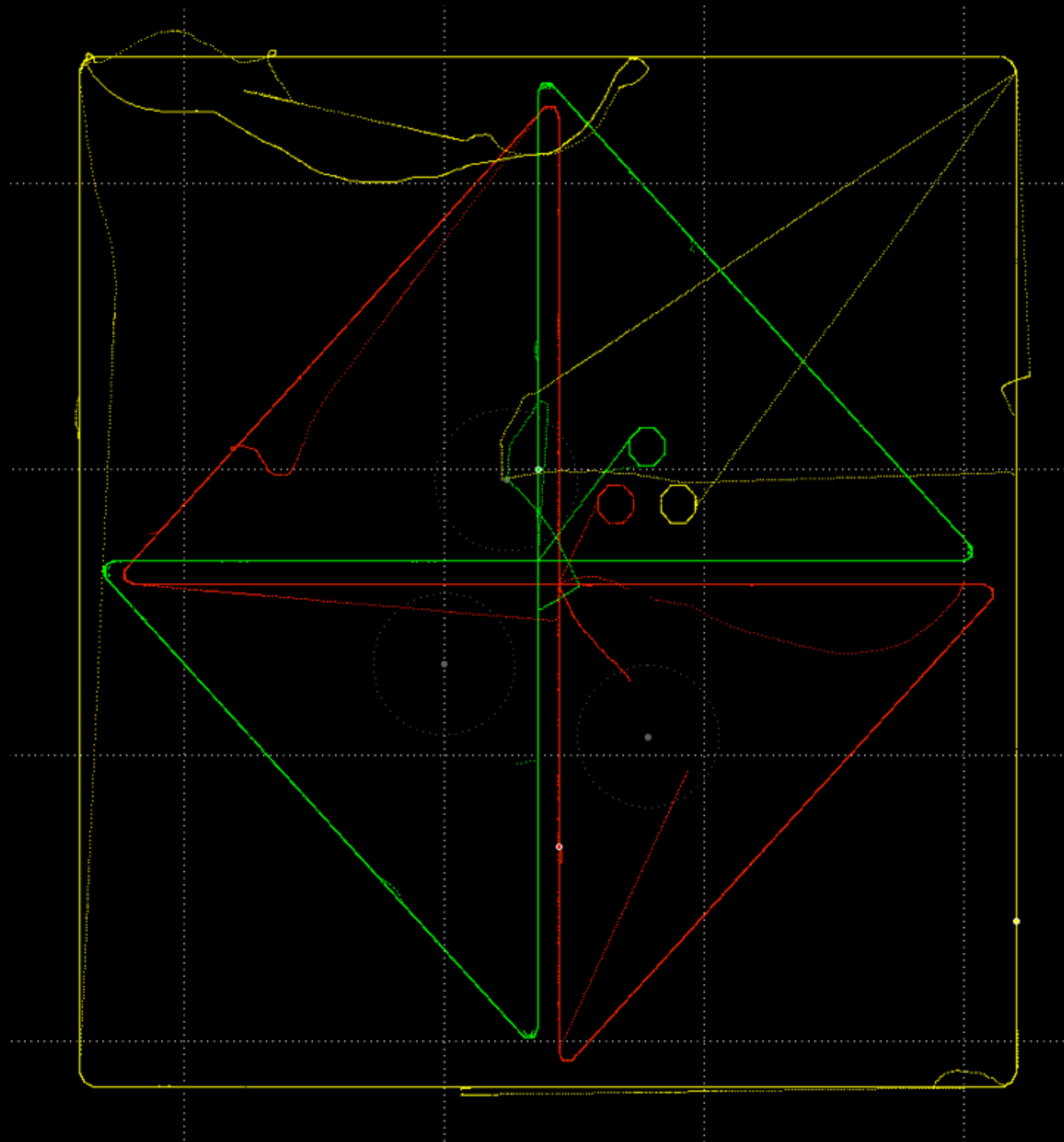
spurs experiment site



spurs wave glider survey plan

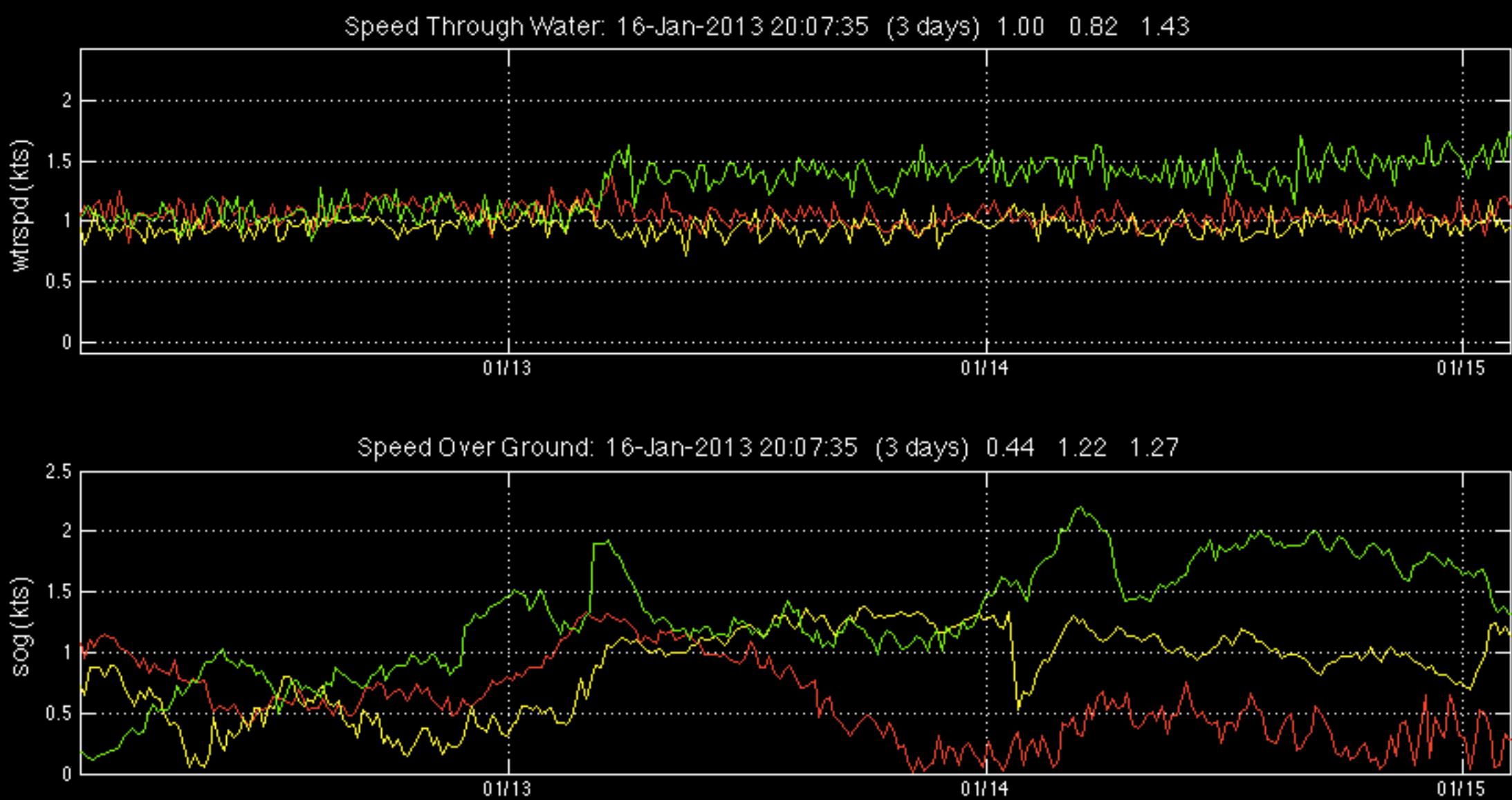


spurs wave glider survey performance



12,000 km as of 15 Jan 2013

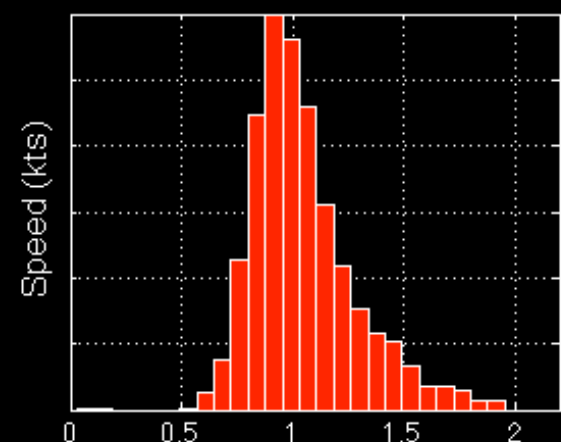
wave glider performance



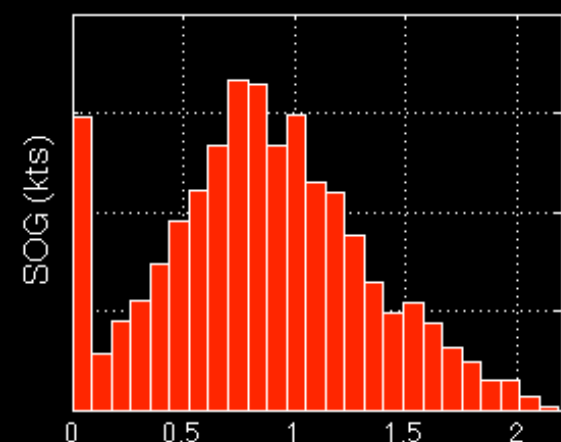
wave glider performance

2

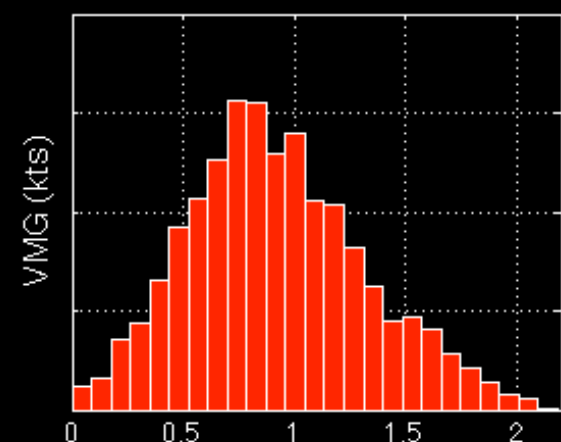
speed



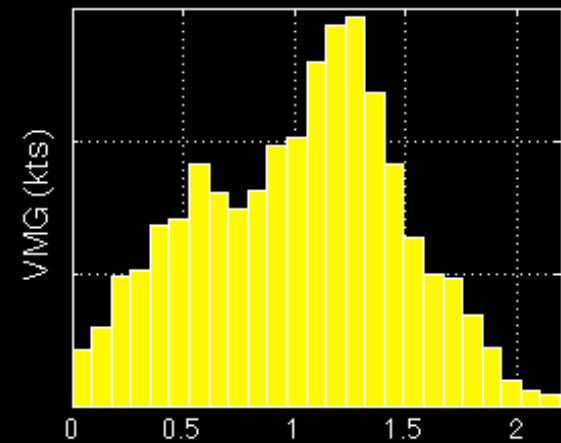
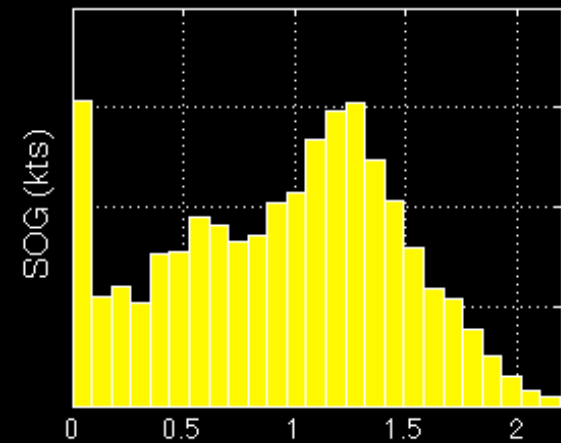
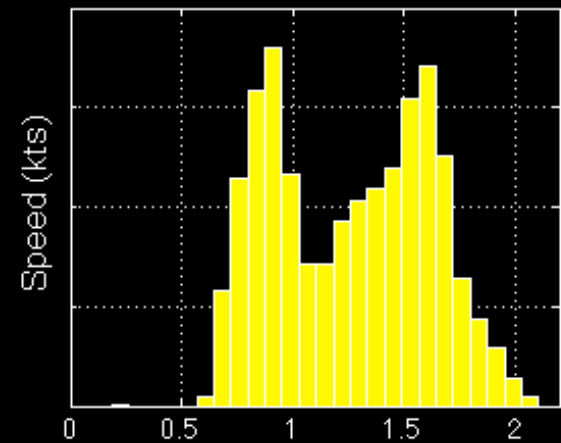
sog



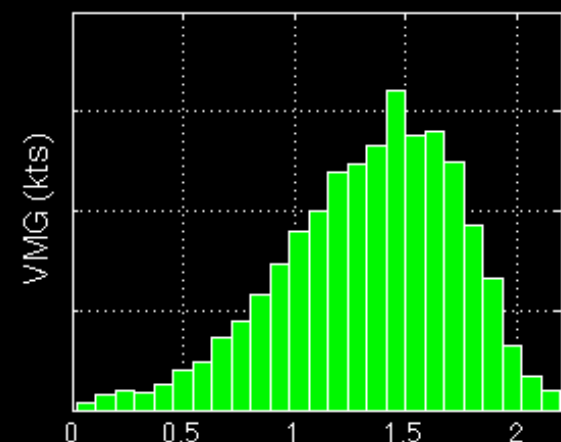
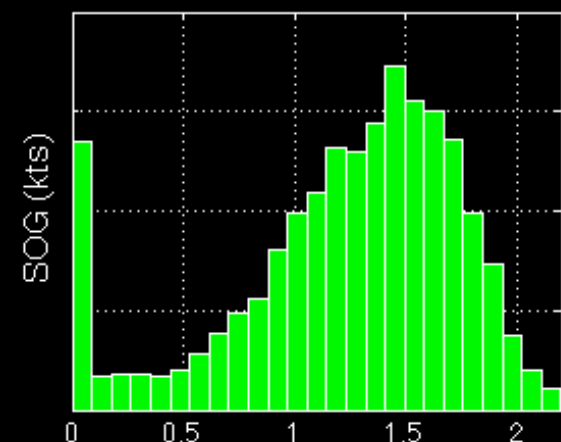
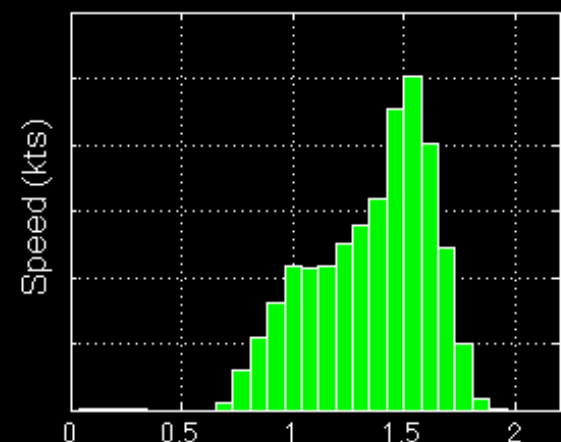
vmg



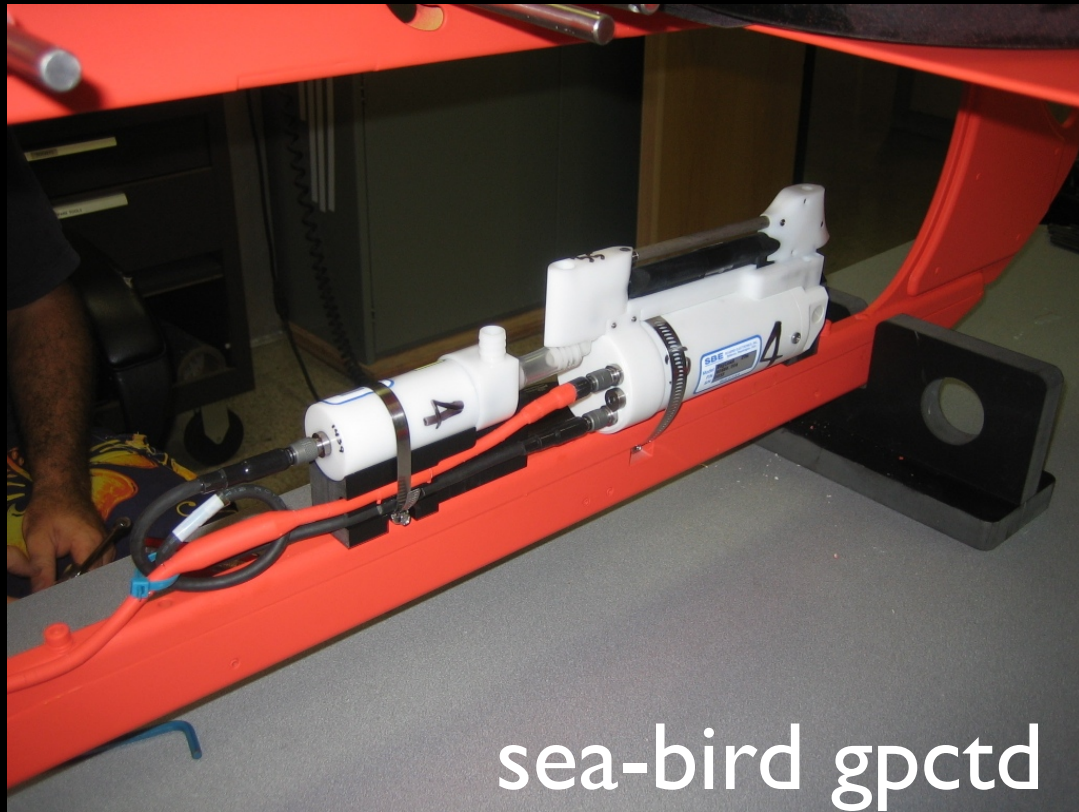
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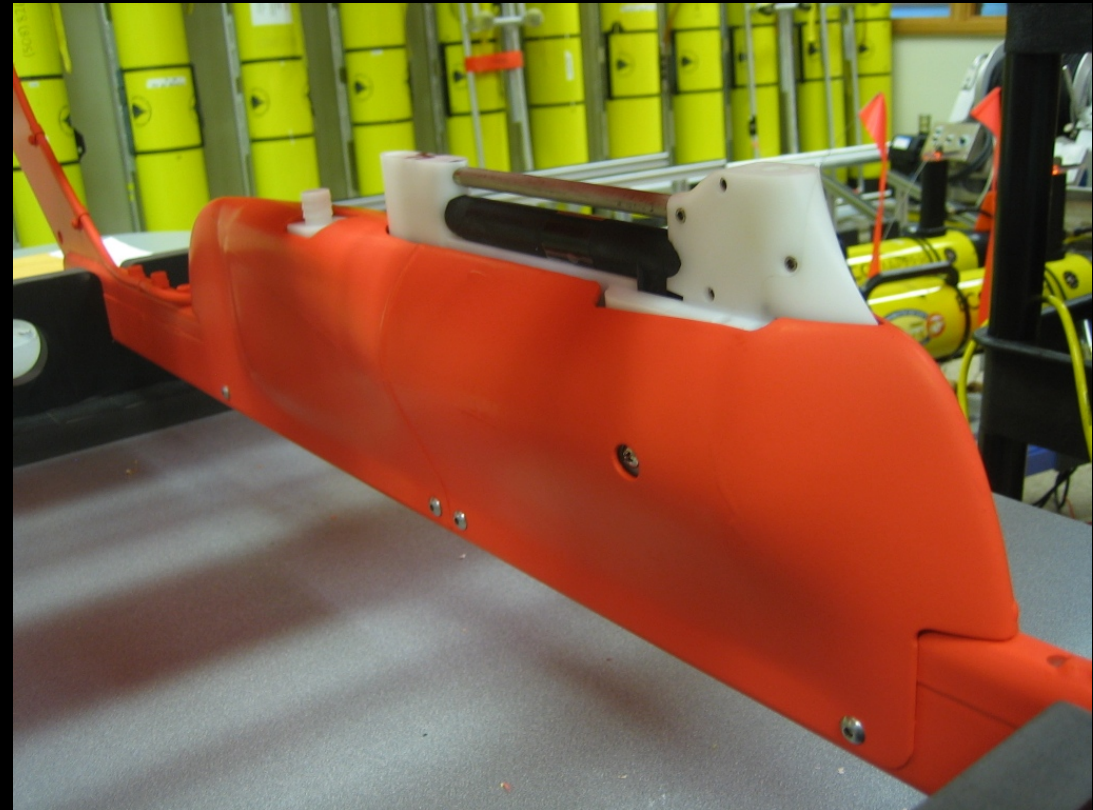
4



sensors



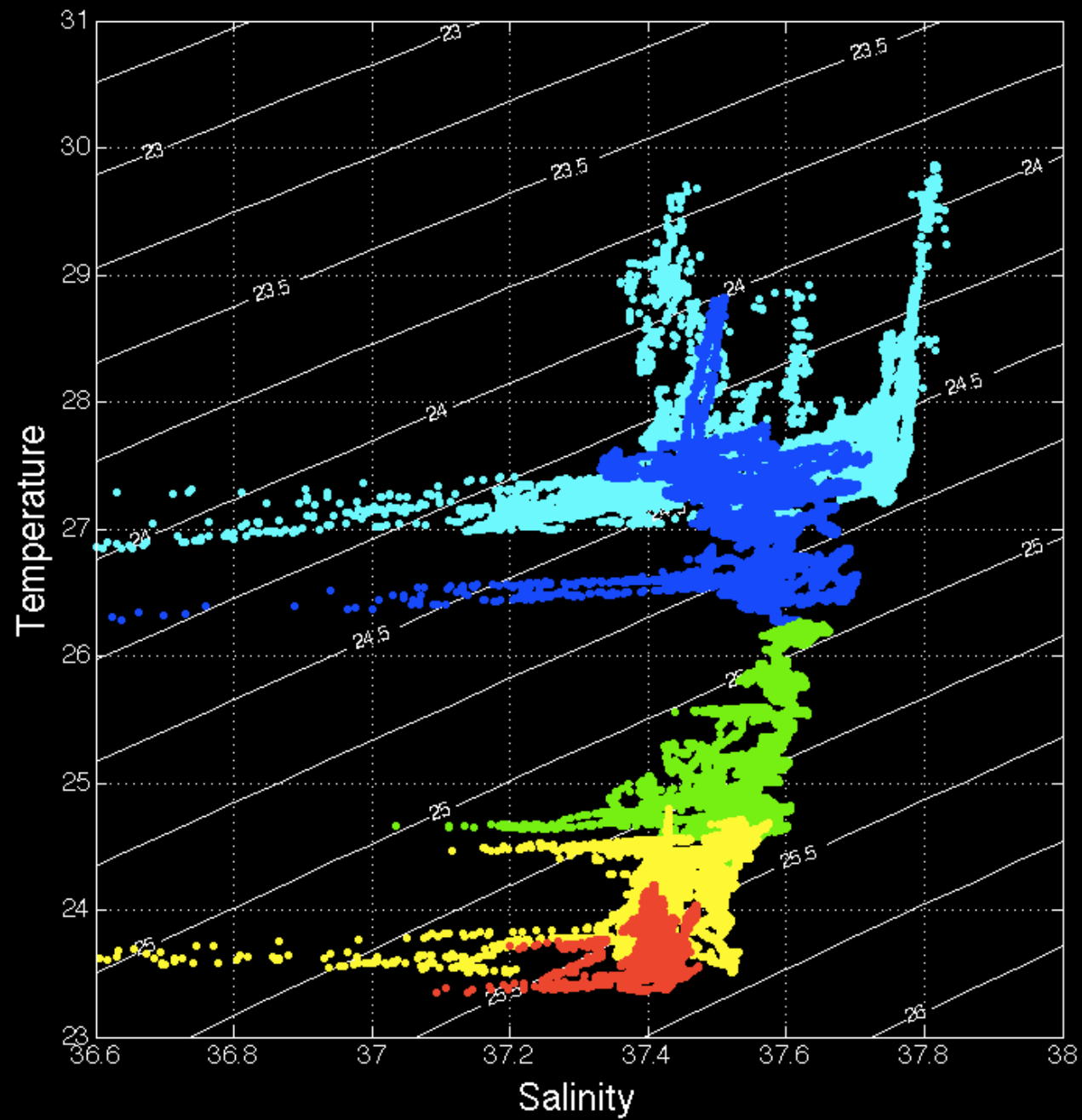
sea-bird gpctd



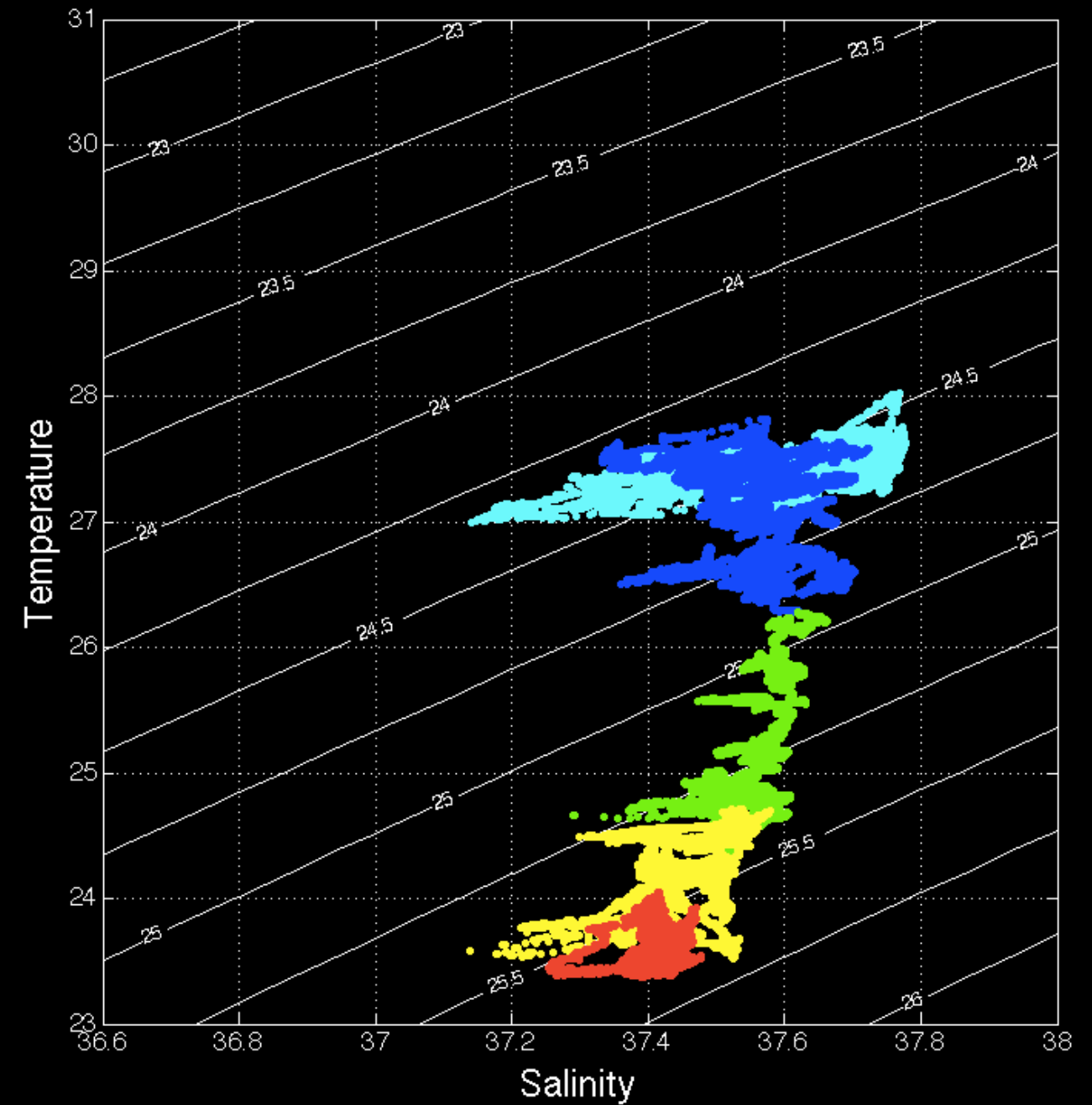
airmar pb200

T-S evolution

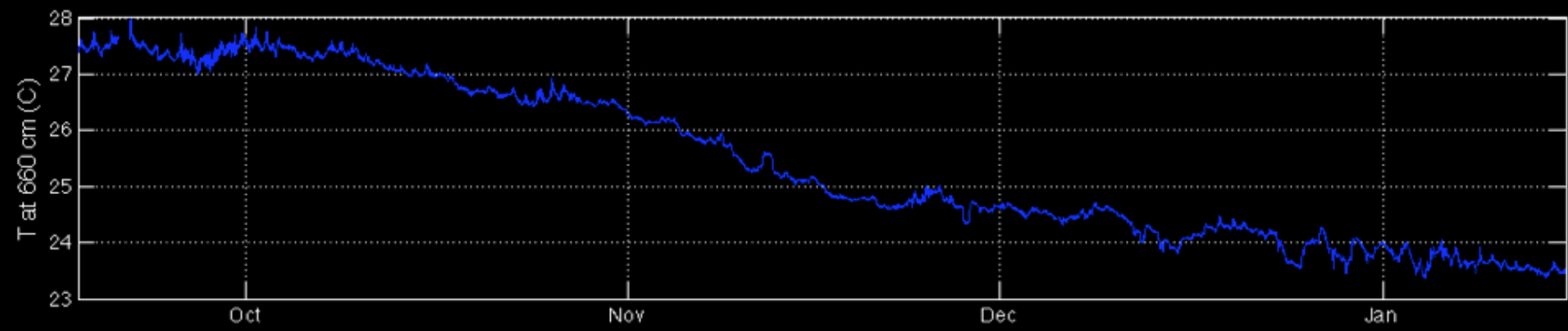
Float (20 cm)



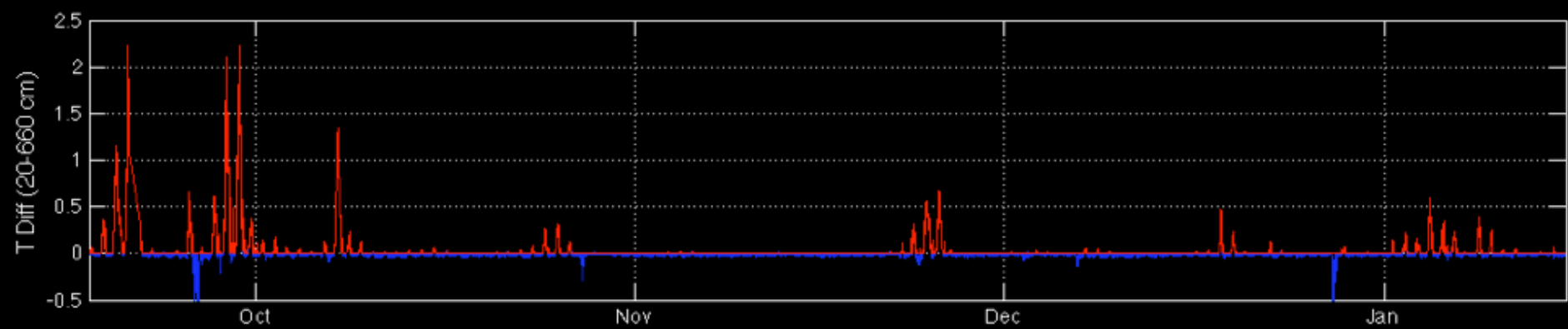
Sub (660 cm)



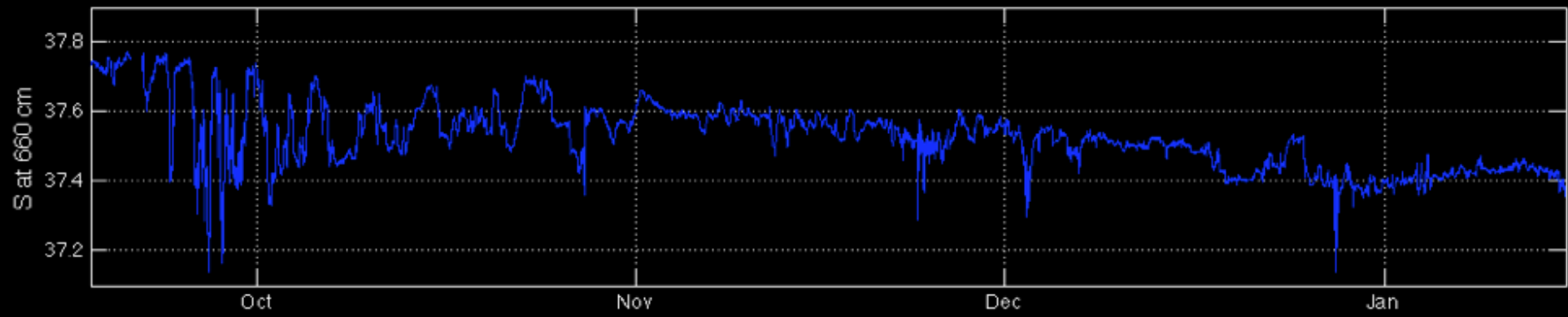
record-length T and S



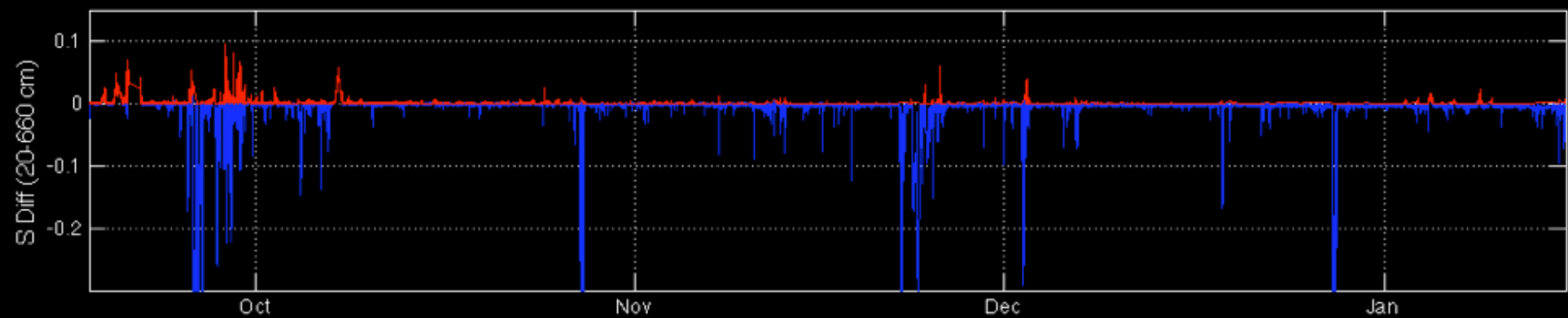
T sub



ΔT

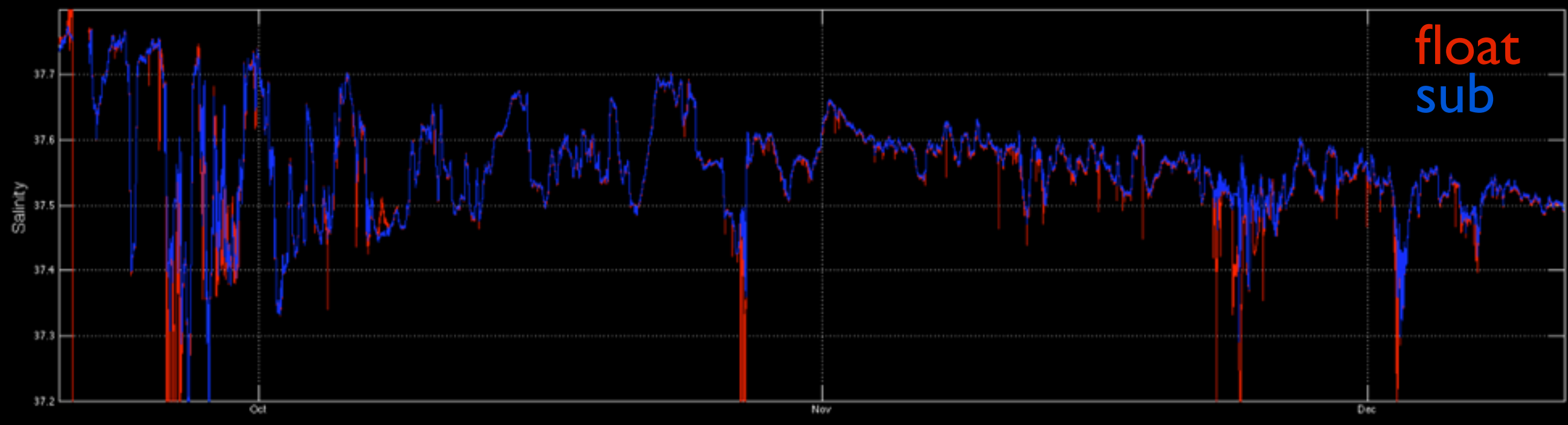
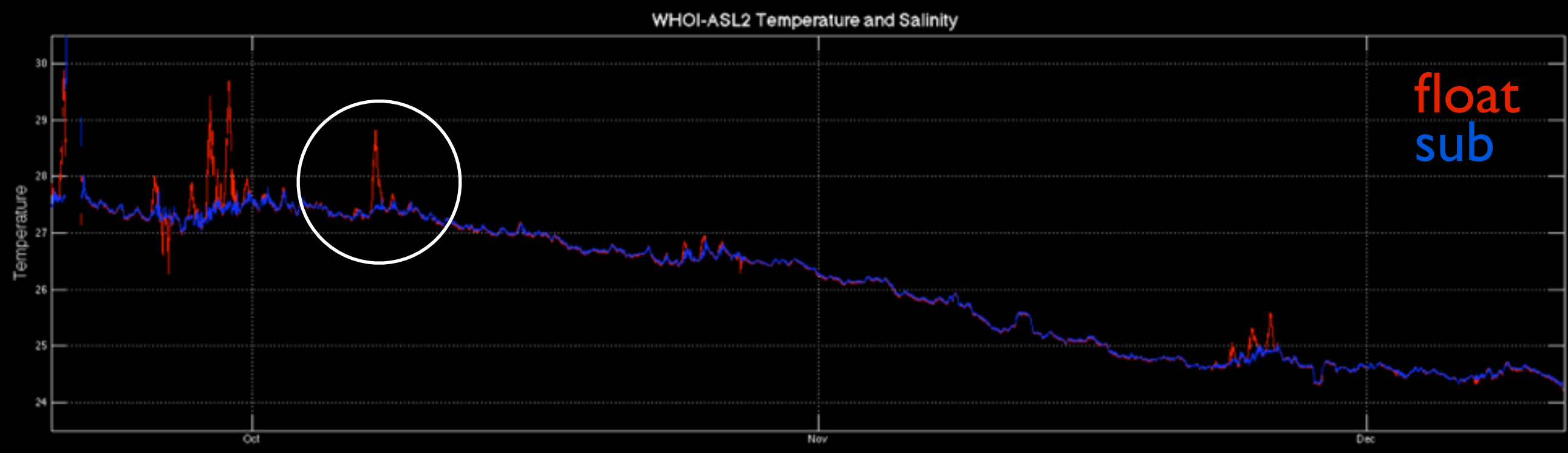


S sub

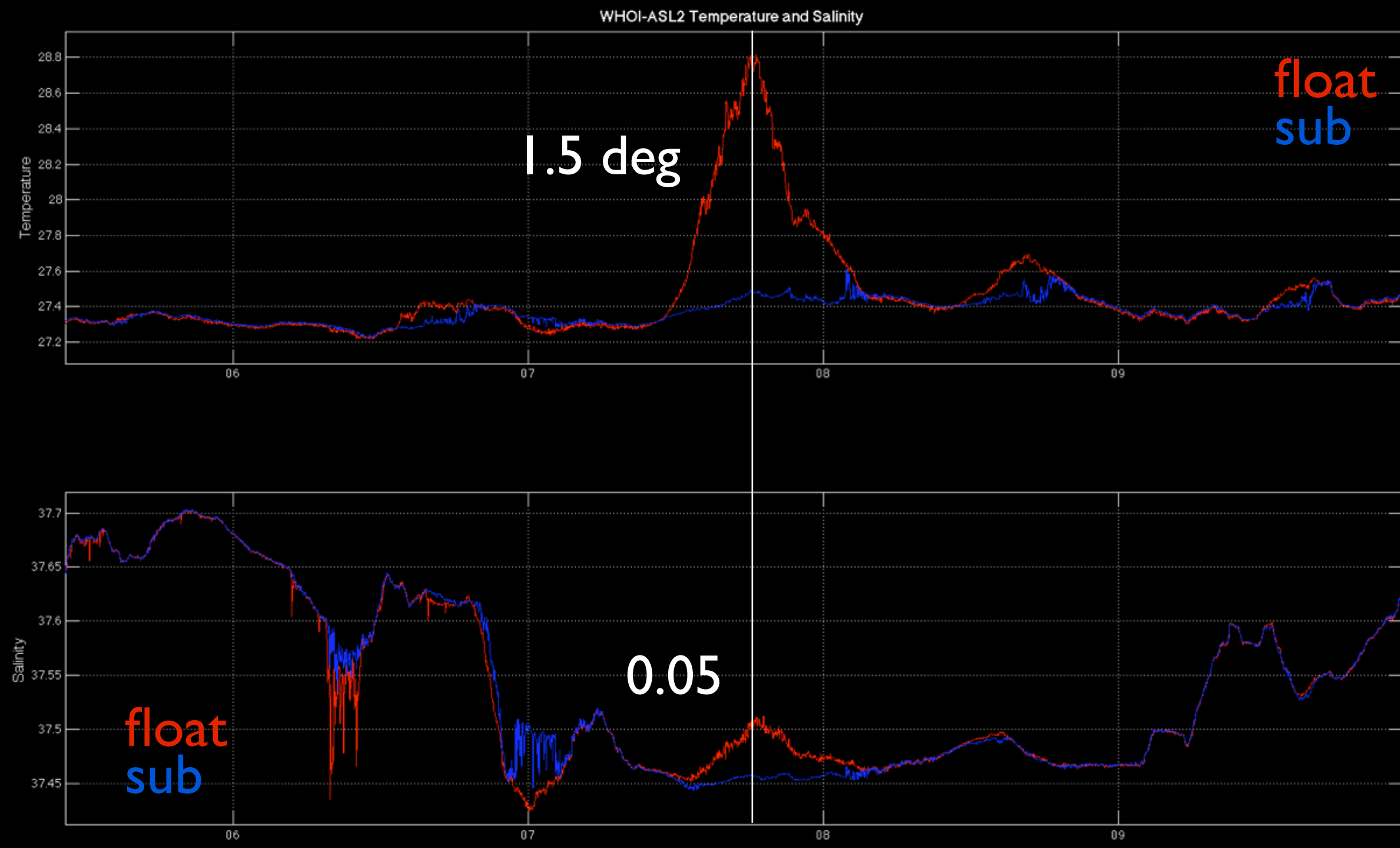


ΔS

diurnal stratification



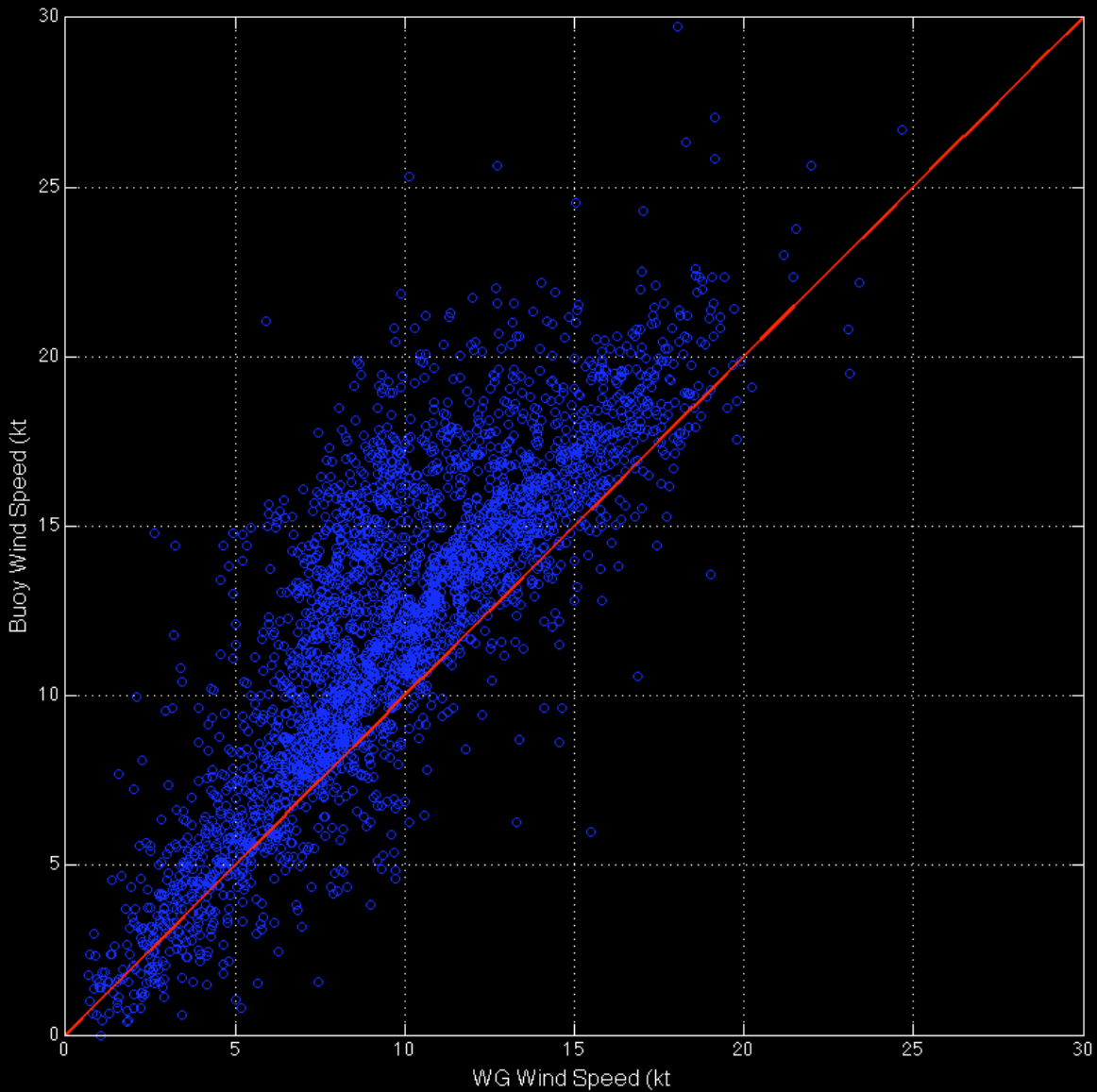
diurnal stratification



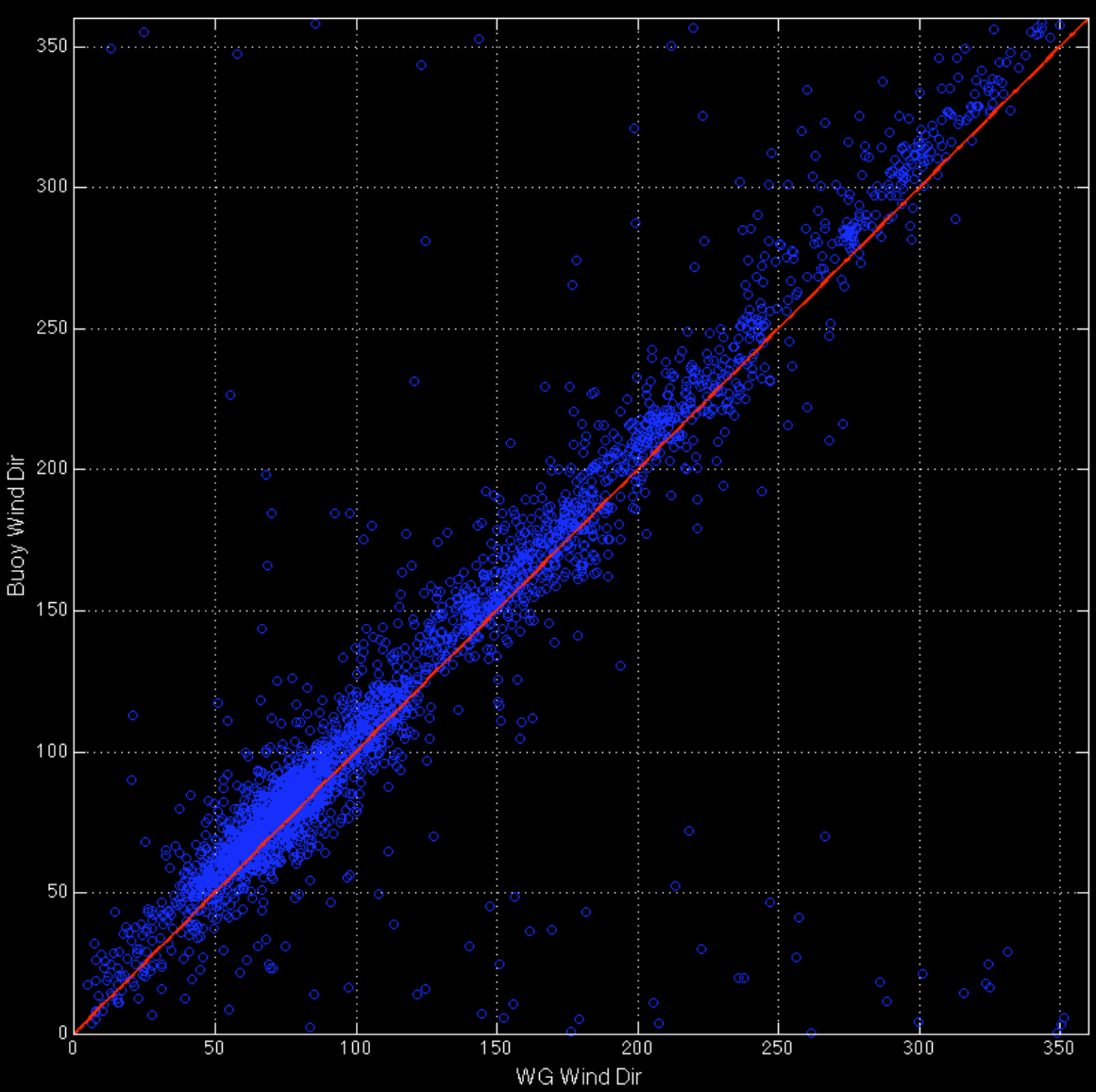


whoi buoy

wind speed

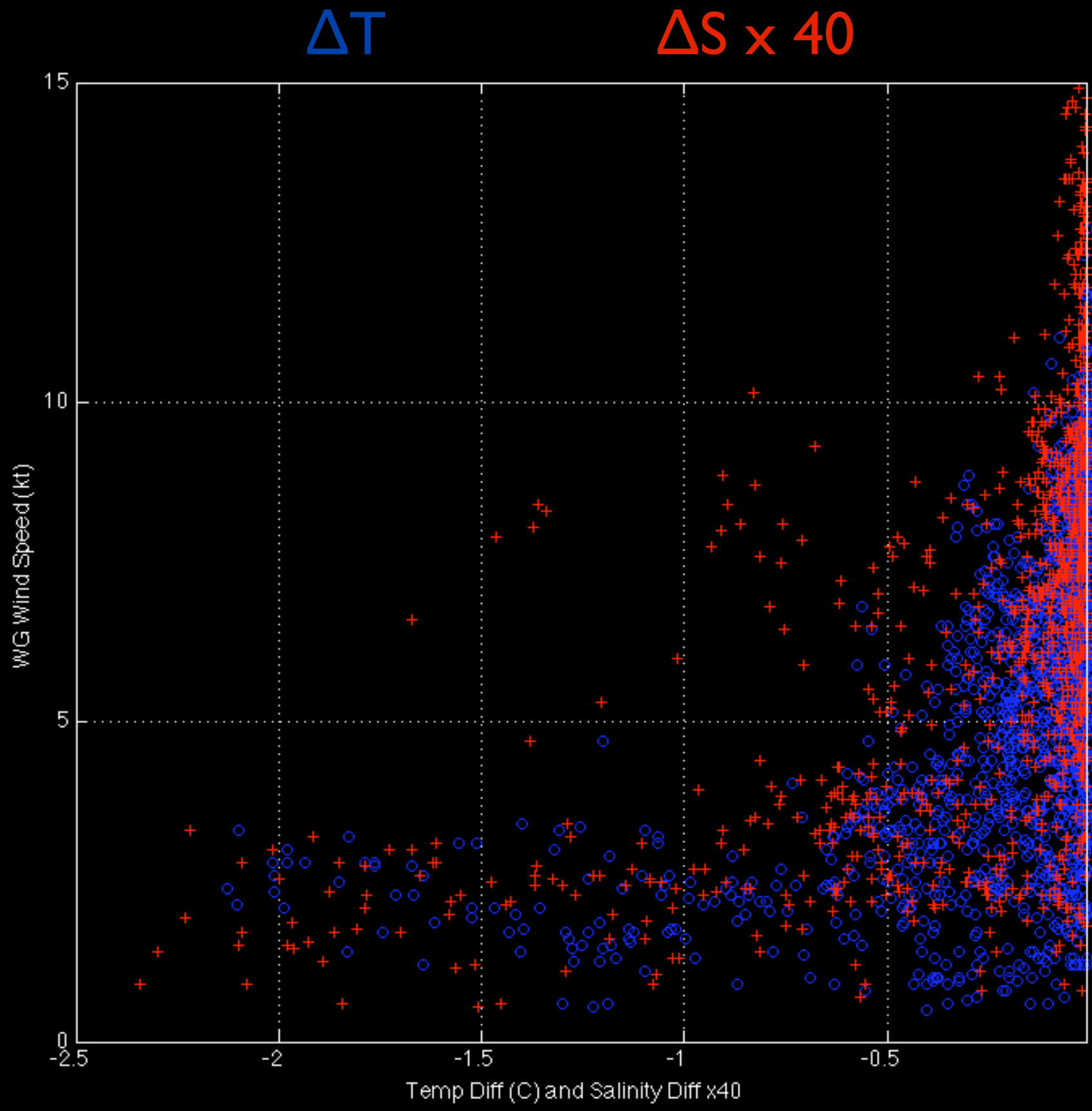


wind direction

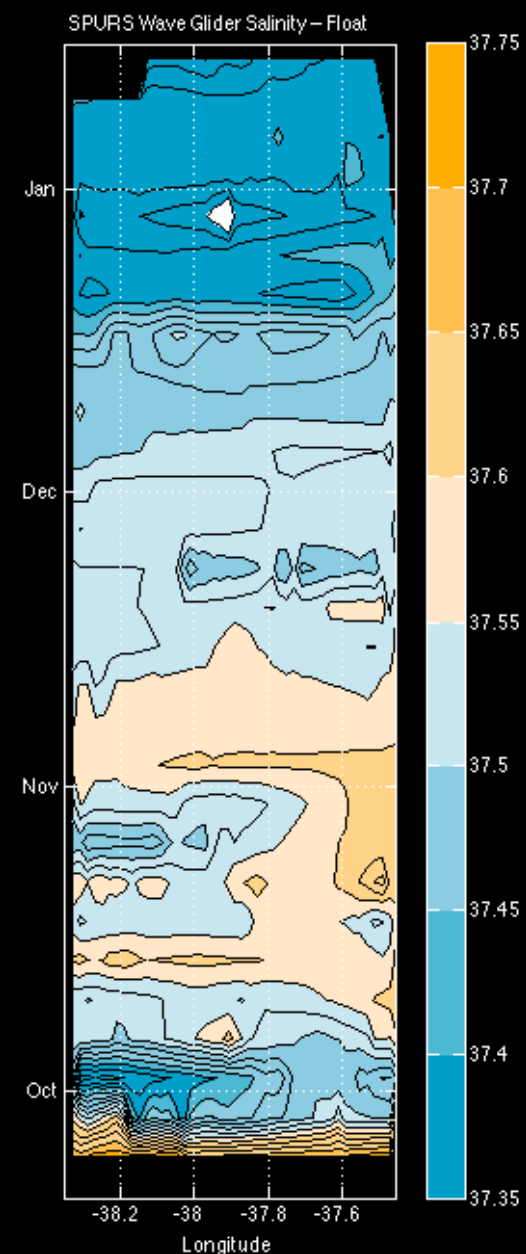
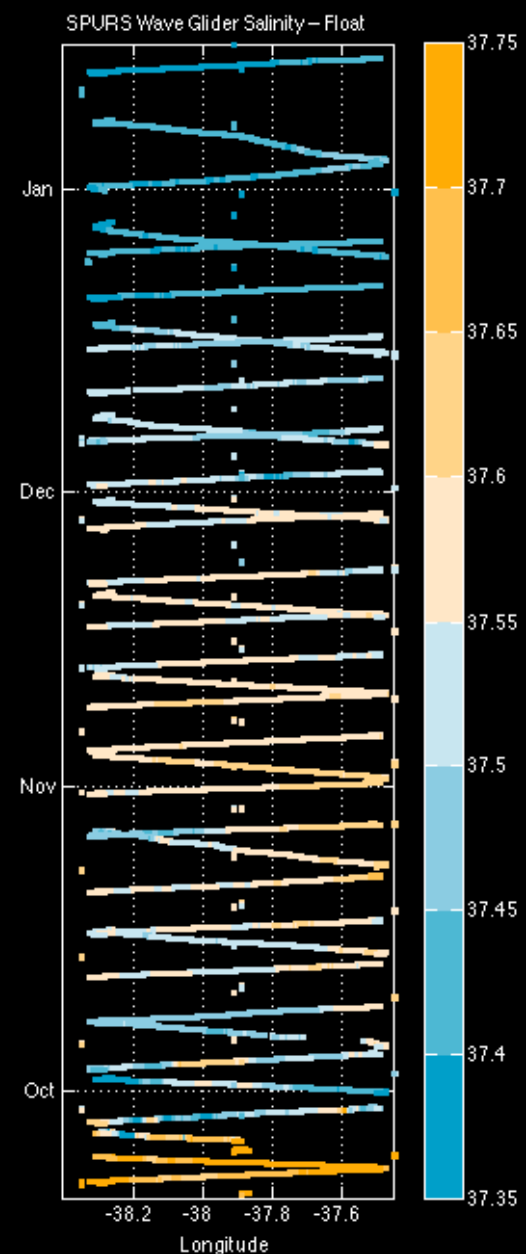
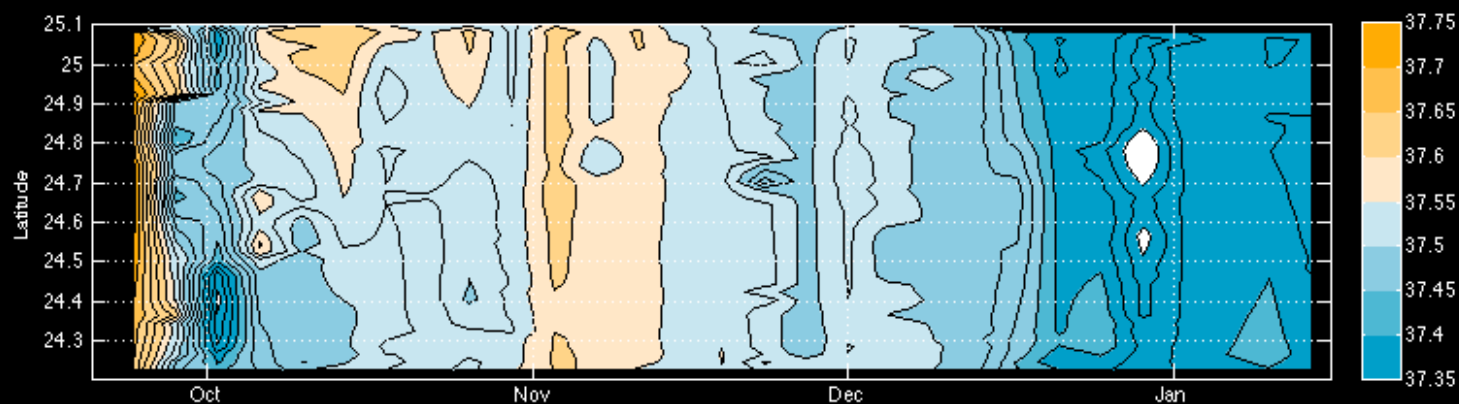
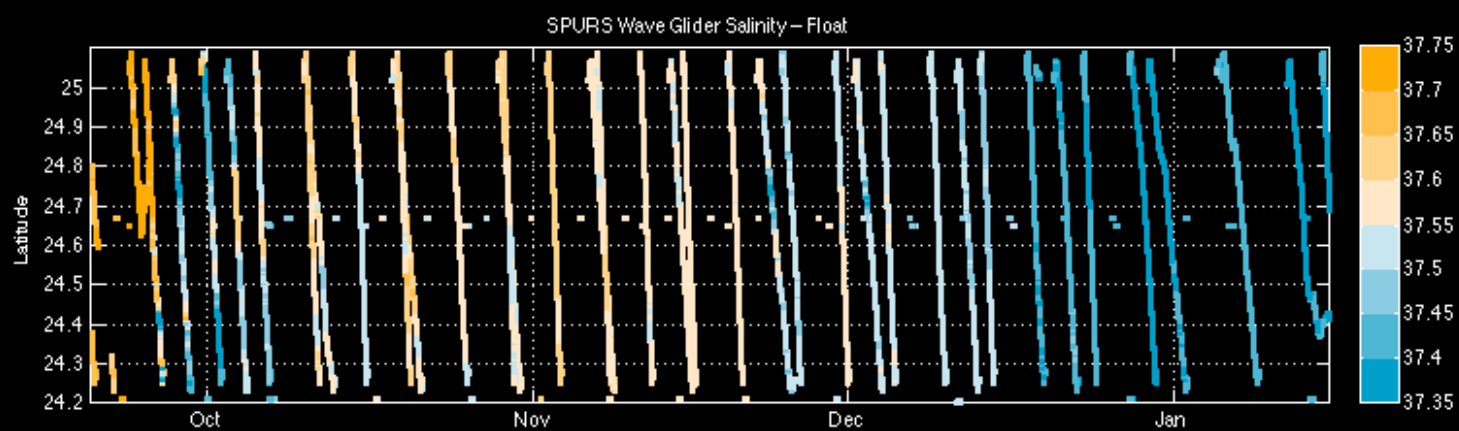
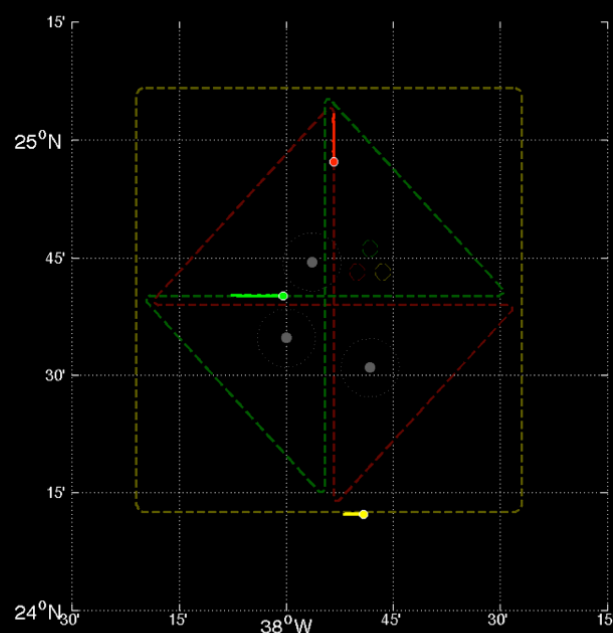


wave glider

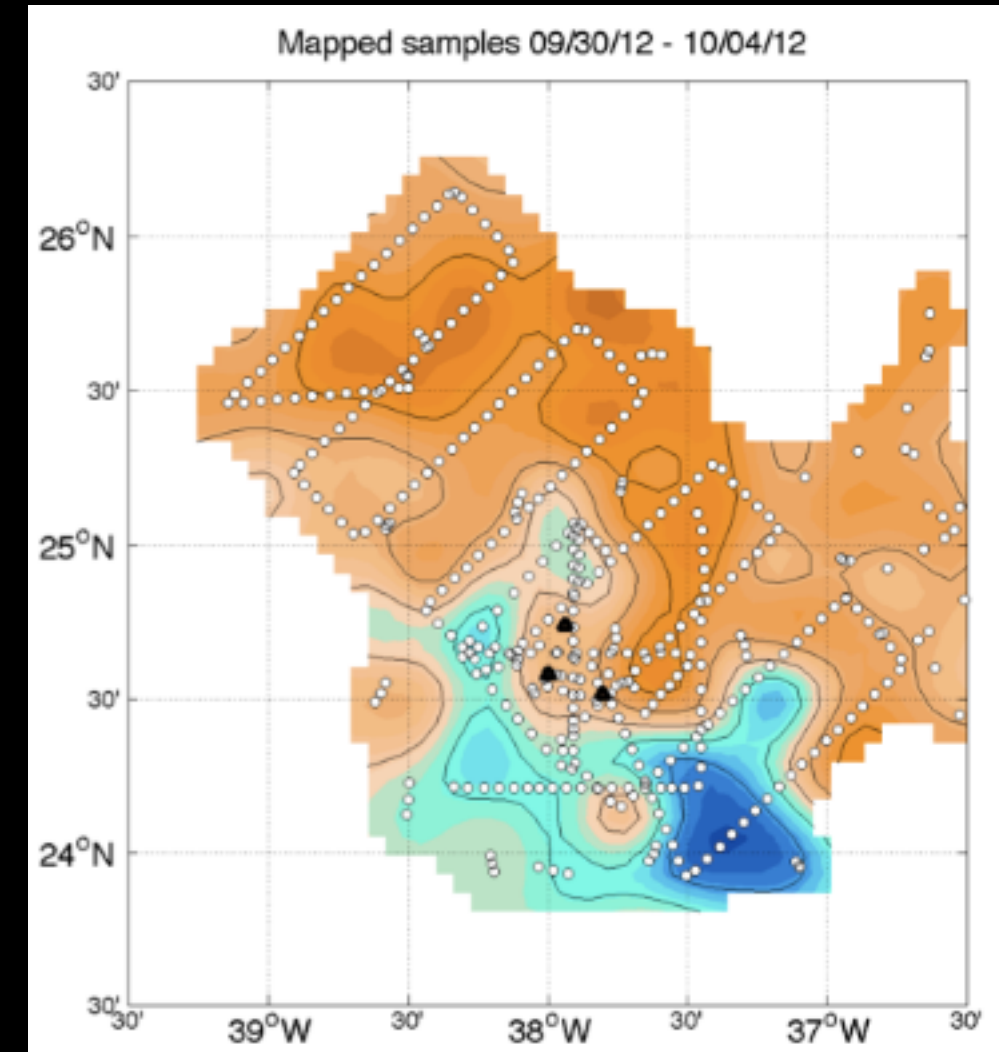
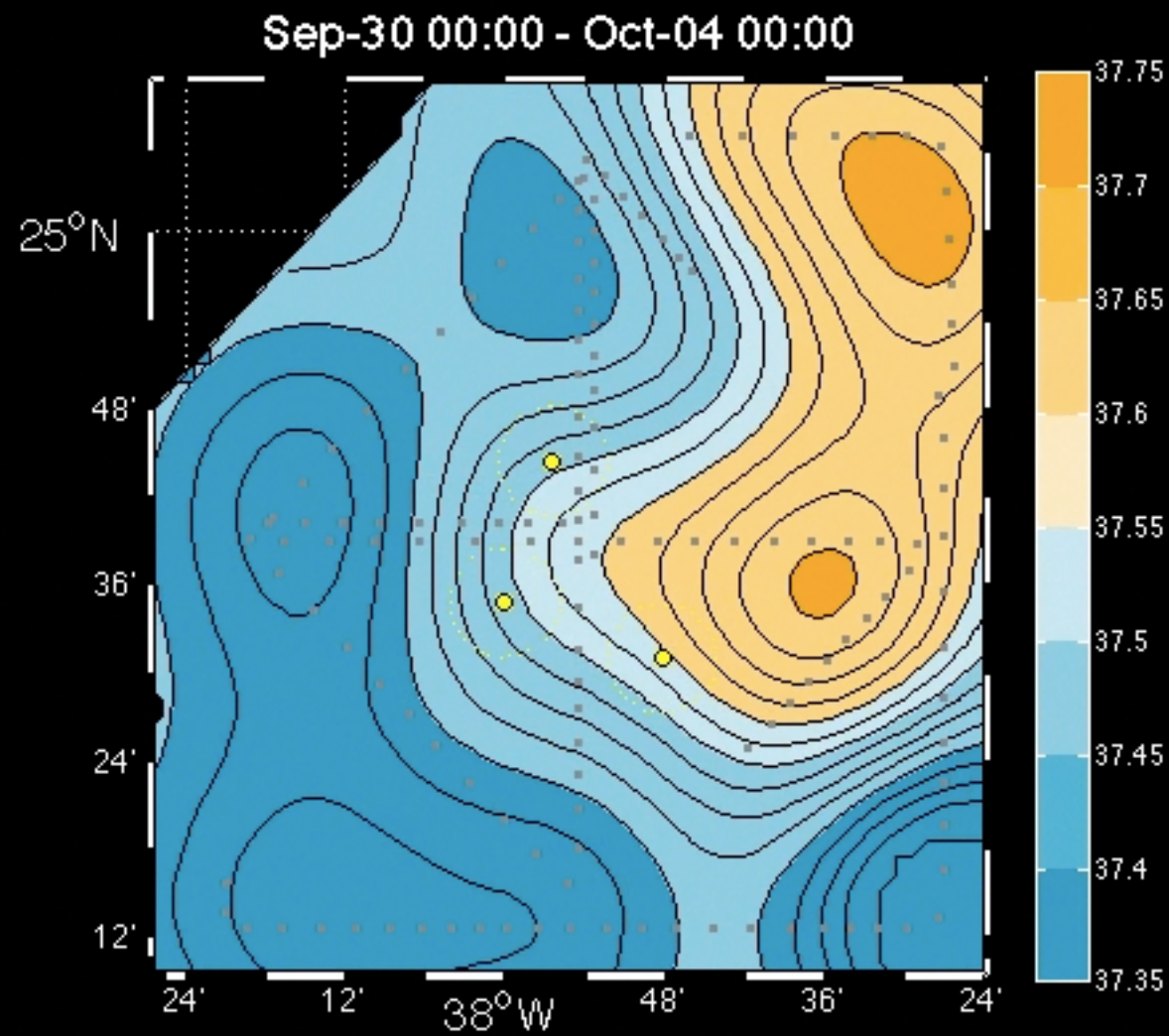
stratification vs wind speed



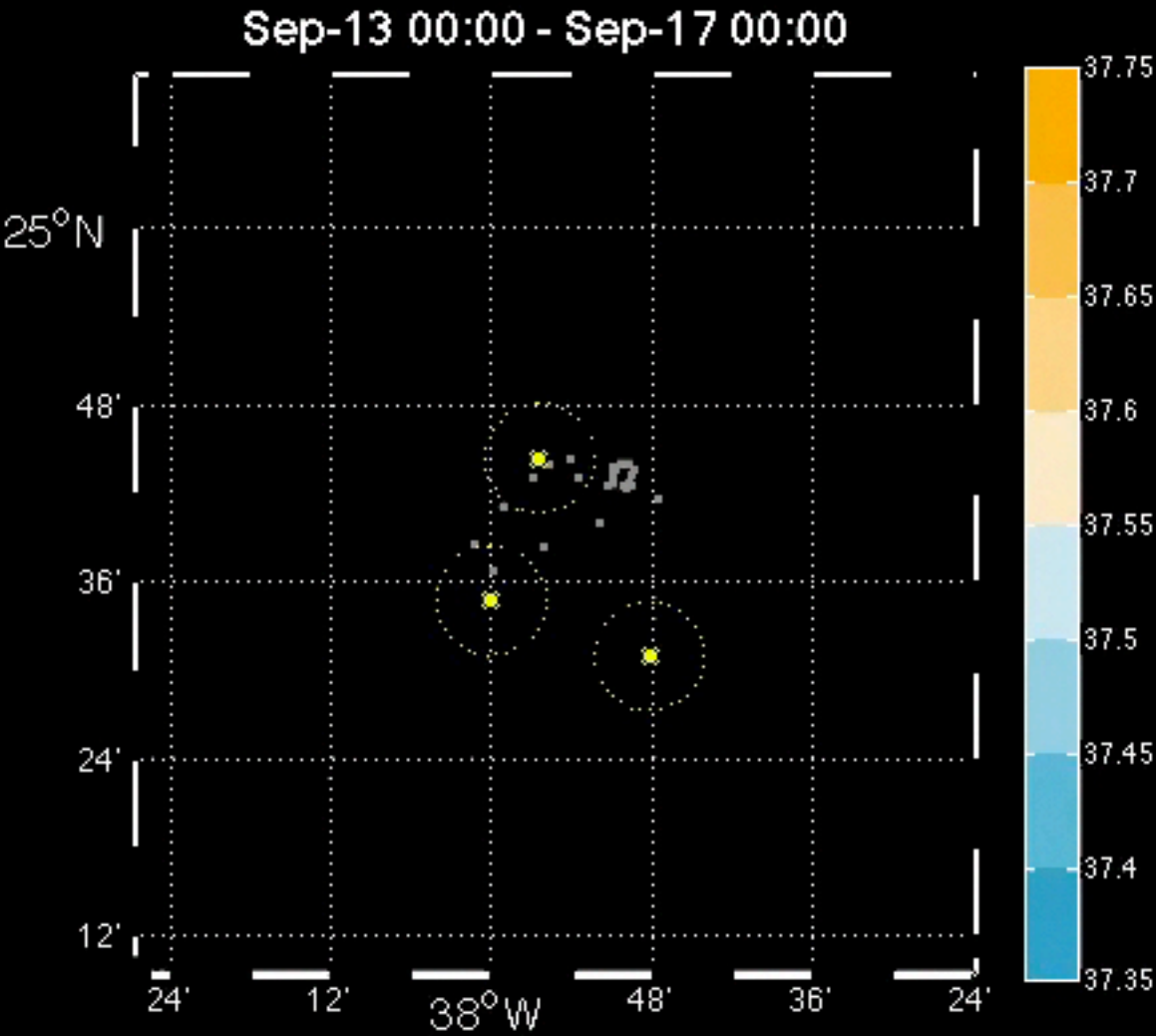
repeat sections of surface salinity



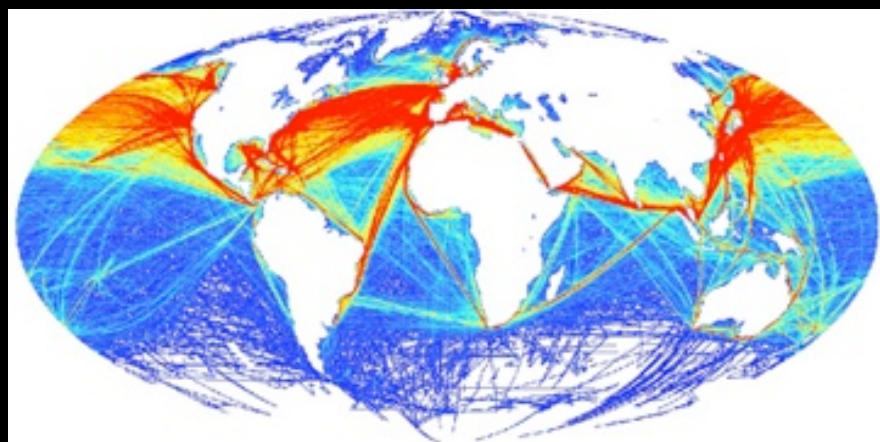
mesoscale mapping of surface salinity



mesoscale mapping of surface salinity

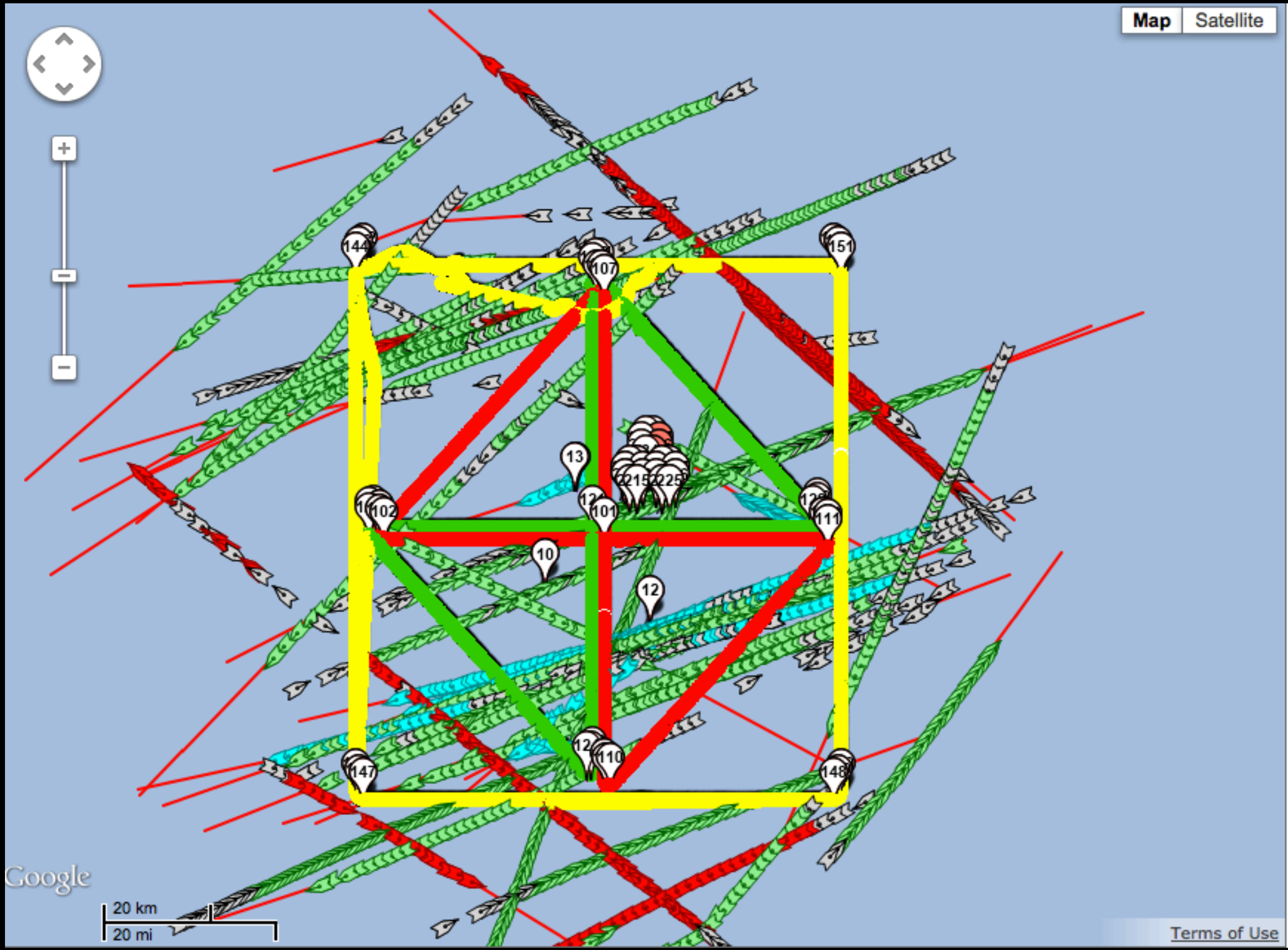


issues and outlook



1. umbilical twists
2. met masts
 - a. breakage
 - b. light failures
3. biofouling?
4. traffic avoidance
5. data throttling
6. general maintenance
7. upgrades

traffic in last 30 days





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